

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: James F. McGuckin, Jr.

Examiner:

Group Art Unit:

Serial No: To be Assigned Filed: Herewith
(Continuation of Application Serial No. 09/838,722)

For: Breast Surgery Method and Apparatus

PRELIMINARY AMENDMENT

ASST. COMMISSIONER FOR PATENTS
Washington, D. C. 20231

Sir:

Prior to examination, please amend the above-identified application as follows:

IN THE SPECIFICATION:

In line 1, after "this", insert -application is a continuation of patent application Serial No. 09/838,722, filed April 19, 2001 which is a divisional of U.S. patent application Serial No. 09/122,185, filed 7/23/98, now U.S. Patent No. 6,280,450, which-

Please amend the specification as follows:

Page 12, line 8, delete "Figure 1" and insert -Figures 1 and 5--;
line 14, after "power source", delete "15" and insert - -(not shown)--.
Page 16, line 11, delete "Figure 6" and insert --Figures 5-8--;
line 12, after "guide struts" insert --or support members--;
line 12, delete "150" and insert --206--;
line 13, delete "115" and insert --228--;
line 15, delete "150" and insert --(support members)206--;
line 17, delete "100";
line 17, delete "115" and insert --228--;
line 19, delete "150" and insert --206--;
line 20, delete "115" and insert --228--.
line 21, delete "95" and insert --208--;
line 22, delete "11-13" and insert - 10-13 --;
line 23, delete "155" and insert --in the form of wire loops--;
delete "150" and insert --206--;
line 23, delete "155";
line 24, delete "Figure 14" and insert --Figures 10-17--.

Page 17, line 20, delete "15-17" and insert -- 13-15 --.

Page 20, line 20, delete "12" and insert --11--.

Page 23, line 19, delete "curring" and insert -cutting--;

Line 20, after "illustrated.", insert -Alternatively the wire can be cryogenic, e.g. eject cryogenic material therefrom, or eject a chemical therefrom for chemical ablation.

IN THE CLAIMS:

Please cancel claims 1-55 without prejudice.

Please add the following claims:

56. A surgical apparatus for excising a tissue mass comprising:

an elongated housing having a distal portion and a channel therein;

first and second support members advanceable from the channel to a second position to radially diverge with respect to each other and to diverge with respect to the target tissue mass to create a penumbra larger than a transverse dimension of the housing, a tip of the first and second support members extending past the target tissue mass; and

a cutting loop expandable by the diverging support members to a position wherein a diameter of the cutting loop exceeds a transverse dimension of the elongated housing, the cutting loop being electrically energized to cut tissue.

57. The apparatus of claim 56, further comprising a membrane advanceable with respect to the elongated housing to remove the cut tissue.

58. The apparatus of claim 57, further comprising a drawstring operatively associated with the membrane to close the membrane about the cut tissue.

59. The apparatus of claim 56, wherein the support members are spring biased to diverge radially.

60. The apparatus of claim 59, wherein the support members are advanced through an axial opening in the elongated housing.

61. The apparatus of claim 60, further comprising a tissue piercing element extending from the housing for providing access to the tissue mass.

62. The apparatus of claim 61, wherein the radially diverging support members create a conical penumbra.

63. A surgical apparatus for excising a target tissue mass comprising:
an elongated housing having a longitudinal axis;
at least one support positioned within the elongated housing and movable from a first position collapsed within the housing to a second position extending from the housing where the at least one support radially diverges with respect to the longitudinal axis of the elongated housing, and
an electrocautery cutting wire advanced by the at least one support from a collapsed position to a second position outside the elongated housing, the electrocautery wire being advanced past the target tissue mass, and a tip of the at least one support extending past the target tissue mass.

64. The apparatus of claim 63, wherein the at least one support radially diverges when extended from the housing to define a region larger in area than the area of the target tissue mass.

65. The apparatus of claim 64, further comprising a tissue piercing element to provide access to the target tissue mass.

66. The apparatus of claim 63, further comprising a second electrocautery wire advanced by a second support member.

67. A surgical apparatus for excising a target tissue mass comprising an elongated housing, electrocautery cutting means for cutting tissue, the cutting means advanceable from a collapsed position within the housing to an expanded position outside the housing and advanceable distal of the tissue mass to be removed, support means for enabling movement of the electrocautery cutting means from the collapsed position to the expanded position, the electrocautery cutting means defining a tissue cutting area having a dimension greater than a transverse dimension of the elongated housing.

68. The apparatus of claim 67, further comprising means extending from the housing for creating access to the tissue mass.

69. The apparatus of claim 67, wherein the apparatus defines a conical penumbra for removing a conical swath of tissue.

70. The apparatus of claim 67, wherein the electrocautery cutting means forms a cutting loop having a diameter larger than a transverse dimension of the elongated housing and larger than the diameter of the tissue mass to be removed.

71. The apparatus of claim 70, wherein the cutting means are cinched together after advancement to the larger diameter.

72. The apparatus of claim 67, wherein the support means are spring biased radially outwardly.

73. The apparatus of claim 71, wherein the support means are spring biased radially outwardly.

74. A surgical apparatus for excising a target tissue mass comprising:

an elongated housing having a channel;

a plurality of elongated members positioned within the channel of the elongated housing and movable from a first collapsed position within the housing to a second expanded position outside the channel of the housing, the elongated members in the second position defining a tissue excision region having a diameter larger than a transverse dimension of the elongated housing; and

at least one electrocautery wire movable from a first position within the elongated housing to a second expanded position.

75. The apparatus of claim 74, further comprising a tissue piercing member distal of the elongated housing to provide access to the target tissue mass.

76. The apparatus of claim 74, wherein the elongated members radially diverge as they are advanced from the elongated housing.

77. The apparatus of claim 76, further comprising a tissue piercing member distal of the elongated housing to provide access to the target tissue mass.

78. The apparatus of claim 76, further comprising a tissue containment bag advanceable from the channel in the elongated housing to envelop the target tissue mass.

79. The apparatus of claim 76, wherein the elongated members are spring biased to radially diverge.

80. The apparatus of claim 74, further comprising an expandable sheath advanceable from the elongated housing to provide a radially inward force on the target tissue mass.

REMARKS

This application is a continuation of application serial no. 09/838,722, filed April 19, 2001, which is a divisional of application serial no.

09/122,185, filed 7/23/98, which issued on August 28, 2001 as U.S. Patent No. 6,280,450. The foregoing amendments to the specification track the amendments made during prosecution of the '185 parent application in response to informalities objections by the Examiner. The formal drawings submitted with this continuation application are identical to the formal drawings submitted in the parent application.

By this amendment, claims 1-55 have been cancelled without prejudice. Claims 56-80 have been added. No new matter has been added. Support for the new claims is provided in the specification.

Prompt and favorable consideration of this application is respectfully requested. The Examiner is invited to contact the undersigned should the Examiner believe it would expedite prosecution.

Respectfully submitted,

Dated: 10/16/01

By: 

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